S
350.864
H3a
971

PLEASE RETURN

ANALYSIS OF CONTRACTS AWARDED
CALENDAR YEAR 1971

STATE DOCUMENTS COLLECTION
JUN 7 1978
MONTANA STATE LIBRARY
930 E Lyndale Ave.
Helena, Montana 59601

PREPARED BY THE
STATE OF MONTANA
DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

Montana State Library
3 0864 1003 9859 6

CONTRACT ANALYSES
Calendar Year 1971

FOREWORD

The attached tabulations have been prepared from the Detailed Estimate and Contract Award sheet for all contracts awarded during the calendar year 1971. A brief explanation of each of the following tables is provided to help in the interpretation of the figures and to lessen the possibility of erroneous conclusions.

Table 1 - Summary of New and Reconstructed Roadway Only, by County and Financial District.

This table is intended to inform the user of how many actual miles of roadway were let to contract and the costs involved. It includes all items pertinent to the same section of roadway except structures.

Table 1A - Summary of Total Amounts Awarded by County and Financial District.

This table is a total of all miles and costs involved regardless of the type of project. Besides roadway costs, it includes signing, lighting, fencing and bridge projects.

Table 2 - Summary of Roadway Mileage Awarded by Systems.

The table involves the same type of construction as Table 1. Table 2, however, provides a cost per mile figure for the different systems and also provides a simple analysis of benefits by inclusion of the "cost per annual vehicle mile."

Table 3-3A-3B-3C-3D - Summary of Type of Construction.

A separate table has been prepared for each Federal Aid System with all projects including signing and Fencing classified into 10 different categories. The purpose of this table is to give a general indication of what type of construction is responsible for the major share of monies spent. For example, note the bulk of Interstate monies is spent for New Construction, whereas, the greater share for Primary and Secondary is spent for Reconstruction.

Table 4-4A-4C - Summary by Surface Type by Systems.

These tables indicate the average cost per mile of various items included in a completed roadway by type of surfacing. Caution should be exercised in using the average cost per mile data due to the small sample involved for some cost items.

Table 5 - Summary of Roadway Mileage Awarded by Number of Traffic Lanes.

This table deals with the same miles and costs involved in Tables 1 and 2.

Table 6-6A-6C-6D - Summary of Structures by Type.

These tables summarize the number of structures let by type and also provide a cost per square foot, by type of structure.

Table 7-7A-7B-7C-7D - Summary of Roadway Mileage Awarded by ADT.

The table involves only actual roadway constructed, as Tables 1,2 and 5 and provides a relationship between the volumes of traffic, miles constructed and costs. It is possible to further develop this table to obtain a road user benefit on a vehicle mile basis.

Table 8 - Summary of Contracted and Non-contracted Costs by System.

Some items, such as railroad flagging, roadway materials, detours and traffic control devices are considered non-contract items in certain instances. The costs of such items are included in the Detailed Estimate, but not in the Contract Award Amount. This table tabulates the two costs for the users information.

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF ROADWAY MILEAGE AWARDED
BY COUNTY AND FINANCIAL DISTRICT
DURING CALENDAR YEAR 1971

THIS TABLE SUMMARIZES ONLY NEW OR RECONSTRUCTED ROADWAY. REFER TO TABLE 1A FOR THE TOTAL AMOUNTS OF CONTRACTS AWARDED

APRIL 27, 1972

TABLE 1

COUNTY AND	INTERSTATE SYSTEM		PRIMARY SYSTEM		SECONDARY SYSTEM		OTHER SYSTEMS		ALL SYSTEMS	
FINANCIAL DISTRICT	MILES	COST	MILES	COST	MILES	COST	MILES	COST	MILES	COST
FLATHEAD					6.638	1,059,592	.257	249,976	6.895	1,309,568
LAKE			.388	126,979					.388	126,979
FD #01			.388	126,979	6.638	1,059,592	.257	249,976	7.283	1,436,547
BLAINE			.595	447,562	7.868	438,006			8.463	885,568
GLACIER			2.128	443,849	1.373	235,966			3.501	679,815
TOOLE					5.080	458,996			5.080	458,996
FD #02			2.723	891,411	14.321	1,132,968			17.044	2,024,379
PHILLIPS			7.325	1,319,232					7.325	1,319,232
SHERIDAN					14.362	480,141			14.362	480,141
FD #03			7.325	1,319,232	14.362	480,141			21.687	1,799,373
CUSTER	8.138	1,571,225			5.694	196,254			13.832	1,767,479
DAWSON	5.780	2,282,878							5.780	2,282,878
WIBAUX	15.208	3,619,778							15.208	3,619,778
FD #04	29.126	7,473,881			5.694	196,254			34.820	7,670,135
CASCADE	10.032	3,780,300							10.032	3,780,300
TETON	7.738	2,958,442							7.738	2,958,442
FD #06	17.770	6,738,742							17.770	6,738,742
BROADWATER			8.303	1,078,794					8.303	1,078,794
JEFFERSON	17.847	10,696,314							17.847	10,696,314
LEWIS & CLARK	6.133	1,234,501							6.133	1,234,501
FD #07	23.980	11,930,815	8.303	1,078,794					32.283	13,009,609
MINERAL					.277	282,328			.277	282,328
POWELL	5.906	3,890,662							5.906	3,890,662
FD #08	5.906	3,890,662			.277	282,328			6.183	4,172,990
GALLATIN					6.746	738,127			6.746	738,127
FD #10					6.746	738,127			6.746	738,127
TOTAL	76.782	30,034,100	18.739	3,416,416	48.038	3,889,410	.257	249,976	143.816	37,589,902

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU
SUMMARY OF TOTAL AMOUNTS AWARDED
BY COUNTY AND FINANCIAL DISTRICT
DURING CALENDAR YEAR 1971
TABLE 1A

APRIL 27, 1972

COUNTY AND	INTERSTATE SYSTEM		PRIMARY SYSTEM		SECONDARY SYSTEM		OTHER SYSTEMS		ALL SYSTEMS	
FINANCIAL DISTRICT	MILES	COST	MILES	COST	MILES	COST	MILES	COST	MILES	COST
FLATHEAD					6.638	1,517,085	.257	249,976	6.895	1,767,061
LAKE			.388	126,979					.388	126,979
LINCOLN			2.400	131,660					2.400	131,660
FD #01			2.788	258,639	6.638	1,517,085	.257	249,976	9.683	2,025,700
BLAINE			.595	474,933	7.868	445,811			8.463	920,744
GLACIER			2.128	443,849	1.373	235,966			3.501	679,815
HILL				23,534		15,280				38,814
LIBERTY				5,032						5,032
TOOLE			45.800	46,814	20.480	532,239			66.280	579,053
FD #02			48.523	994,162	29.721	1,229,296			78.244	2,223,458
PHILLIPS			7.325	1,386,558					7.325	1,386,558
ROOSEVELT				101,117	7.466	122,623			7.466	223,740
SHERIDAN					14.362	490,055			14.362	490,055
VALLEY					8.003	294,707			8.003	294,707
FD #03			7.325	1,487,675	29.831	907,385			37.156	2,395,060
CUSTER	8.138	1,620,971		549,672	5.694	196,254			13.832	2,366,897
DAWSON	5.780	2,530,555							5.780	2,530,555
MC CONE	2.350	3,133,176							2.350	3,133,176
RICHLAND					8.968	859,152			8.968	859,152
WIBAUX	15.208	3,695,122							15.208	3,695,122
FD #04	31.476	10,979,824		549,672	14.662	1,055,406			46.138	12,584,902
FERGUS						19,788				19,788
FD #05						19,788				19,788
CASCADE	10.032	4,312,515		60,959		26,658			10.032	4,400,132
CHOUTEAU				21,507	73.200	332,616			73.200	354,123
PONDERA	19.948	5,725,913	.650	69,201	.320	25,928			20.918	5,821,042
TETON	7.738	3,270,174		49,832					7.738	3,320,006
FD #06	37.718	13,308,602	.650	201,499	73.520	385,202			111.888	13,895,303
BROADWATER			8.303	1,078,794					8.303	1,078,794
JEFFERSON	17.847	11,297,517		3,160		9,047			17.847	11,309,724
LEWIS & CLARK	6.133	1,234,501	.411	15,314	8.277	108,146		96,971	14.821	1,454,932
FD #07	23.980	12,532,018	8.714	1,097,268	8.277	117,193		96,971	40.971	13,843,450
GRANITE		199,743			7.165	413,406			7.165	613,149
MINERAL	12.727	1,390,917			2.466	1,357,507			15.193	2,748,424
MISSOULA		10,715		45,430						56,145
POWELL	5.906	4,734,043		11,658	5.011	105,569			10.917	4,851,270
FD #08	18.633	6,335,418		57,088	14.642	1,876,482			33.275	8,268,988

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU
SUMMARY OF TOTAL AMOUNTS AWARDED
BY COUNTY AND FINANCIAL DISTRICT
DURING CALENDAR YEAR 1971
TABLE 1A

APRIL 27, 1972

COUNTY AND FINANCIAL DISTRICT	INTERSTATE SYSTEM MILES	INTERSTATE SYSTEM COST	PRIMARY SYSTEM MILES	PRIMARY SYSTEM COST	SECONDARY SYSTEM MILES	SECONDARY SYSTEM COST	OTHER SYSTEMS MILES	OTHER SYSTEMS COST	ALL SYSTEMS MILES	ALL SYSTEMS COST
BEAVERHEAD	10.145	3,983,730							10.145	3,983,730
FD #09	10.145	3,983,730							10.145	3,983,730
GALLATIN				15,413	6.746	738,127			6.746	753,540
MEAGHER						8,514				8,514
SWEET GRASS		196,497								196,497
WHEATLAND						2,302				2,302
FD #10		196,497		15,413	6.746	748,943			6.746	960,853
BIG HORN	13.064	2,867,326			76.100	24,990			89.164	2,892,316
STILLWATER		242,648								242,648
TREASURE						5,455				5,455
YELLOWSTONE	14.319	2,574,355		138,867	10.655	150,348			24.974	2,863,570
FD #11	27.383	5,684,329		138,867	86.755	180,793			114.138	6,003,989
ROSEBUD		596,371								596,371
FD #12		596,371								596,371
TOTAL	149.335	53,616,789	68.000	4,800,283	270.792	8,037,573	.257	346,947	488.384	66,801,592

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF ROADWAY MILEAGE AWARDED BY SYSTEMS
DURING CALENDAR YEAR 1971
THIS TABLE SUMMARIZES ONLY NEW OR RECONSTRUCTED ROADWAYS
TABLE 2

APRIL 27, 1972

SYSTEM	MILEAGE	TOTAL COST	COST PER MILE	ANNUAL VEHICLE MILES	COST PER ANNUAL VEHICLE MILE
RURAL					
INTERSTATE RURAL	76.166	29,855,315	391,976	45,223,865	00.660
PRIMARY RURAL	18.140	3,006,601	165,744	9,248,370	00.325
SECONDARY RURAL	47.201	3,442,859	72,940	3,132,065	01.099
OTHER					00.000
SUBTOTAL RURAL	141.507	36,304,775	256,558	57,604,300	00.630
MUNICIPAL					
INTERSTATE MUNICIPAL	.616	178,785	290,235	356,605	00.501
PRIMARY MUNICIPAL	.599	409,815	684,165	490,195	00.836
SECONDARY MUNICIPAL	.837	446,551	533,513	794,240	00.562
OTHER	.257	249,976	972,669	974,185	00.256
SUBTOTAL MUNICIPAL	2.309	1,285,127	556,572	2,615,225	00.491
TOTAL BY SYSTEM					
INTERSTATE	76.782	30,034,100	391,160	45,580,470	00.658
PRIMARY	18.739	3,416,416	182,315	9,738,565	00.350
SECONDARY	48.038	3,889,410	80,965	3,926,305	00.990
OTHER	.257	249,976	972,669	974,185	00.256
GRAND TOTAL	143.816	37,589,902	261,374	60,219,525	00.624

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF TYPE OF CONSTRUCTION
DURING CALENDAR YEAR 1971
BY SYSTEM
TABLE 3

APRIL 27, 1972

	INTERSTATE	
TYPE OF CONSTRUCTION	MILES	COST
RURAL		
NEW CONSTRUCTION	47.303	23,608,596
RECONSTRUCTION		
ADD TWO LANES	28.863	6,246,719
MAJOR STRUCTURES		5,350,823
RESURFACE	12.727	416,614
STAGE CONSTRUCTION	59.826	15,759,617
TRAFFIC CONTROL, SEEDING & FENCING		224,542
REST AREA, WEIGH STN & SENIC OVERLOOK		1,375,724
WIDENING ROADWAY		
OTHER		429,671
TOTAL		53,412,306
MUNICIPAL		
NEW CONSTRUCTION		
RECONSTRUCTION		
ADD TWO LANES	.616	178,785
MAJOR STRUCTURES		
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING		25,698
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		204,483
ALL CONSTRUCTION		
NEW CONSTRUCTION	47.303	23,608,596
RECONSTRUCTION		
ADD TWO LANES	29.479	6,425,504
MAJOR STRUCTURES		5,350,823
RESURFACE	12.727	416,614
STAGE CONSTRUCTION	59.826	15,759,617
TRAFFIC CONTROL, SEEDING & FENCING		250,240
REST AREA, WEIGH STN & SENIC OVERLOOK		1,375,724
WIDENING ROADWAY		
OTHER		429,671
TOTAL		53,616,789

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF TYPE OF CONSTRUCTION DURING CALENDAR YEAR 1971 BY SYSTEM

TABLE 3A

APRIL 27, 1972

TYPE OF CONSTRUCTION	PRIMARY I	
	MILES	COST
RURAL		
NEW CONSTRUCTION	.090	58,262
RECONSTRUCTION	18.050	2,948,339
ADD TWO LANES		
MAJOR STRUCTURES		549,672
RESURFACE		
STAGE CONSTRUCTION	.650	31,874
TRAFFIC CONTROL, SEEDING & FENCING	43.700	505,456
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		101,117
TOTAL		4,194,720
MUNICIPAL		
NEW CONSTRUCTION	.505	389,300
RECONSTRUCTION	.094	20,515
ADD TWO LANES		
MAJOR STRUCTURES		5,537
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING	4.500	174,897
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		590,249
ALL CONSTRUCTION		
NEW CONSTRUCTION	.595	447,562
RECONSTRUCTION	18.144	2,968,854
ADD TWO LANES		
MAJOR STRUCTURES		555,209
RESURFACE		
STAGE CONSTRUCTION	.650	31,874
TRAFFIC CONTROL, SEEDING & FENCING	48.200	680,353
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		101,117
TOTAL		4,784,969

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF TYPE OF CONSTRUCTION DURING CALENDAR YEAR 1971 BY SYSTEM

TABLE 3B

APRIL 27, 1972

	PRIMARY II	
TYPE OF CONSTRUCTION	MILES	COST
RURAL		
NEW CONSTRUCTION		
RECONSTRUCTION		
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING	.411	15,314
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		15,314
MUNICIPAL		
NEW CONSTRUCTION		
RECONSTRUCTION		
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING		
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		
ALL CONSTRUCTION		
NEW CONSTRUCTION		
RECONSTRUCTION		
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING	.411	15,314
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		15,314

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF TYPE OF CONSTRUCTION
DURING CALENDAR YEAR 1971
BY SYSTEM
TABLE 3C

APRIL 27, 1972

	SECONDARY	
TYPE OF CONSTRUCTION	MILES	COST
RURAL		
NEW CONSTRUCTION	45.894	3,084,963
RECONSTRUCTION	1.307	357,896
ADD TWO LANES		
MAJOR STRUCTURES		603,896
RESURFACE	94.645	1,326,563
STAGE CONSTRUCTION	15.488	734,041
TRAFFIC CONTROL, SEEDING & FENCING	97.677	253,563
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER	7.159	21,057
TOTAL		6,381,979
MUNICIPAL		
NEW CONSTRUCTION	.277	282,328
RECONSTRUCTION	.560	164,223
ADD TWO LANES		
MAJOR STRUCTURES	2.189	1,075,179
RESURFACE	2.773	86,692
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING	2.100	42,087
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER	.723	5,085
TOTAL		1,655,594
ALL CONSTRUCTION		
NEW CONSTRUCTION	46.171	3,367,291
RECONSTRUCTION	1.867	522,119
ADD TWO LANES		
MAJOR STRUCTURES	2.189	1,679,075
RESURFACE	97.418	1,413,255
STAGE CONSTRUCTION	15.488	734,041
TRAFFIC CONTROL, SEEDING & FENCING	99.777	295,650
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER	7.882	26,142
TOTAL		8,037,573

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF TYPE OF CONSTRUCTION
DURING CALENDAR YEAR 1971
BY SYSTEM
TABLE 3D

APRIL 27, 1972

TYPE OF CONSTRUCTION	OTHER	
	MILES	COST
RURAL		
NEW CONSTRUCTION		
RECONSTRUCTION		
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING		
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		
MUNICIPAL		
NEW CONSTRUCTION		
RECONSTRUCTION	.257	249,976
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING		96,971
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		346,947
ALL CONSTRUCTION		
NEW CONSTRUCTION		
RECONSTRUCTION	.257	249,976
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING		96,971
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		346,947

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY BY SURFACE TYPE
DURING CALENDAR YEAR 1971

TABLE 4 INTERSTATE SYSTEM APRIL 27, 1972

COST ITEM		STAGE CONSTR	SURFACE TYPE BITUM. MIX	CONCRETE	ALL CONST.	MISC. ITEMS
GRADING	MILES	22.083	98.764		120.847	
	COST	8,447,875	9,806,994		18,254,869	
	COST/MILE	382,551	99,297		151,057	
DRAINAGE	MILES	22.083	121.737		143.820	
	COST	1,366,504	2,100,685		3,467,189	29,226
	COST/MILE	61,880	17,255		24,107	
FOUNDATION	MILES	15.660	127.252		142.912	
	COST	152,267	10,186,778		10,339,045	
	COST/MILE	9,723	80,052		72,345	
SURFACING	MILES	15.660	127.252		142.912	
	COST	139,289	11,007,594		11,146,883	
	COST/MILE	8,894	86,502		77,998	
RDSIDE DEVEL.	MILES		31.567		31.567	
	COST		32,314		32,314	1,373,720
	COST/MILE		1,023		1,023	
EROSION CTL.	MILES	22.083	127.252		149.335	
	COST	350,187	932,780		1,282,967	
	COST/MILE	15,857	7,330		8,591	
TRAFFIC CTL.	MILES	22.083	127.252		149.335	
	COST	23,500	1,541,296		1,564,796	176,900
	COST/MILE	1,064	12,112		10,478	
FENCING	MILES	22.083	98.764		120.847	
	COST	203,650	415,964		619,614	
	COST/MILE	9,222	4,211		5,127	
MISC.	MILES	19.733	101.690		121.423	
	COST	85,500	41,280		126,780	
	COST/MILE	4,332	405		1,044	
BRIDGES	SQ. FEET					366,640
	COST					5,773,868
	COST/SQ. FOOT					15.748
ALL ITEMS	MILES	22.083	127.252		149.335	
	COST	10,768,772	36,065,685		46,834,457	7,353,714
	COST/MILE	487,649	283,419		313,620	

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY BY SURFACE TYPE
DURING CALENDAR YEAR 1971

TABLE 4A

PRIMARY SYSTEM

APRIL 27, 1972

COST ITEM		SURFACE TYPE GRAVEL	BITUM. MIX	CONCRETE	ALL CONST.	MISC. ITEMS
GRADING	MILES		18.739		18.739	
	COST		835,597		835,597	11,607
	COST/MILE		44,591		44,591	
DRAINAGE	MILES		18.739		18.739	
	COST		474,389		474,389	
	COST/MILE		25,315		25,315	
FOUNDATION	MILES		19.389		19.389	
	COST		808,545		808,545	11,246
	COST/MILE		41,701		41,701	
SURFACING	MILES		19.389		19.389	
	COST		1,101,971		1,101,971	1,540
	COST/MILE		56,834		56,834	
RDSIDE DEVEL.	MILES		.505		.505	
	COST		8,642		8,642	
	COST/MILE		17,112		17,112	
EROSION CTL.	MILES		18.649		18.649	
	COST		131,924		131,924	98,117
	COST/MILE		7,074		7,074	
TRAFFIC CTL.	MILES		19.389		19.389	48.611
	COST		97,834		97,834	674,274
	COST/MILE		5,045		5,045	13,870
FENCING	MILES		10.819		10.819	
	COST		20,362		20,362	
	COST/MILE		1,882		1,882	
MISC.	MILES		17.662		17.662	
	COST		5,608		5,608	
	COST/MILE		317		317	
BRIDGES	SQ. FEET					25,479
	COST					556,809
	COST/SQ. FOOT					21.853
ALL ITEMS	MILES		19.389		19.389	48.611
	COST		3,484,872		3,484,872	1,353,593
	COST/MILE		179,734		179,734	27,845

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY BY SURFACE TYPE
DURING CALENDAR YEAR 1971

TABLE 4C

SECONDARY SYSTEM

APRIL 27, 1972

COST ITEM		SURFACE TYPE GRAVEL	BITUM. MIX	CONCRETE	ALL CONST.	MISC. ITEMS
GRADING	MILES	88.914	61.471		150.385	
	COST	1,015,128	757,110		1,772,238	
	COST/MILE	11,416	12,316		11,784	
DRAINAGE	MILES	15.714	26.930		42.644	
	COST	254,497	271,191		525,688	
	COST/MILE	16,195	10,070		12,327	
FOUNDATION	MILES	6.746	69.257		76.003	
	COST	5,612	882,755		888,367	
	COST/MILE	831	12,746		11,688	
SURFACING	MILES	79.946	79.912		159.858	
	COST	460,784	1,969,814		2,430,598	
	COST/MILE	5,763	24,649		15,204	
RDSIDE DEVEL.	MILES		.277		.277	
	COST		8,448		8,448	
	COST/MILE		30,498		30,498	
EROSION CTL.	MILES	15.714	49.615		65.329	
	COST	79,163	151,878		231,041	
	COST/MILE	5,037	3,061		3,536	
TRAFFIC CTL.	MILES	88.914	79.912		168.826	99.777
	COST	21,500	214,087		235,587	281,370
	COST/MILE	241	2,679		1,395	2,819
FENCING	MILES	6.746	6.730		13.476	
	COST	6,264	16,870		23,134	14,280
	COST/MILE	928	2,506		1,716	
MISC.	MILES	15.714	40.177		55.891	
	COST	2,400	7,192		9,592	
	COST/MILE	152	179		171	
BRIDGES	SQ. FEET					40,340
	COST					1,693,606
	COST/SQ. FOOT					41.983
ALL ITEMS	MILES	88.914	79.912		168.826	101.966
	COST	1,845,348	4,279,345		6,124,693	1,989,256
	COST/MILE	20,754	53,550		36,278	19,509

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF ROADWAY MILEAGE AWARDED BY NUMBER OF TRAFFIC LANES DURING CALENDAR YEAR 1971

TABLE 5

APRIL 27, 1972

NO. LANES	MILES	COST	COST/MILE
NTERSTATE SYSTEM			
2	14.271	2,805,726	196,603
4	62.511	27,228,374	435,577
TOTAL	76.782	30,034,100	391,160
RIMARY SYSTEM			
2	18.739	3,416,416	182,315
4			
TOTAL	18.739	3,416,416	182,315
ECONDARY SYSTEM			
2	48.038	3,889,410	80,965
4			
TOTAL	48.038	3,889,410	80,965
LL SYSTEMS			
2	81.048	10,111,552	124,760
4	62.511	27,228,374	435,577
TOTAL	143.559	37,339,926	260,101

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU
SUMMARY OF STRUCTURES BY TYPE
DURING CALENDAR YEAR 1971

TABLE 6 INTERSTATE SYSTEM APRIL 27, 1972

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOOT
IMB. GIRD.	X001	1	756	12,463	16.485
ONC. SLAB	X020	1	5,260	133,309	25.343
	X220	5	35,060	663,933	18.937
ONC. GIRD	X221	1	9,794	170,077	17.365
OMP. S/C GIRD.	X071	2	37,632	799,890	21.255
	X771	1	11,440	266,356	23.282
	X971	1	92,988	894,975	9.624
ONC. PRESTR. GIRD.	X181	2	46,516	921,967	19.820
	X281	4	64,646	913,228	14.126
	X481	1	9,240	131,190	14.198
	X781	4	36,004	609,054	16.916
	X981	1	17,304	257,426	14.876
		24	366,640	5,773,868	15.748

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU
SUMMARY OF STRUCTURES BY TYPE
DURING CALENDAR YEAR 1971
TABLE 6A PRIMARY I SYSTEM APRIL 27, 1972

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOOT
TIMB. GIRD.	X001	1	1,881	5,537	2.943
CONC. PRESTR. GIRD.	X081	1	23,598	551,272	23.360
		2	25,479	556,809	21.853

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU
SUMMARY OF STRUCTURES BY TYPE
DURING CALENDAR YEAR 1971

TABLE 6C SECONDARY SYSTEM APRIL 27, 1972

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOOT
EEL GIRD.	X631	1	836	224,520	268.564
MP. S/C GIRD.	X071	1	12,960	856,890	66.118
	X171	1	18,800	465,793	24.776
NC. PRESTR. GIRD.	X081	2	7,744	146,403	18.905
		5	40,340	1,693,606	41.983

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU
SUMMARY OF STRUCTURES BY TYPE
DURING CALENDAR YEAR 1971

TABLE 6D — ALL SYSTEMS — APRIL 27, 1972

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOOT
IMB. GIRD.	X001	2	2,637	18,000	6.825
NC. SLAB	X020	1	5,260	133,309	25.343
	X220	5	35,060	663,933	18.937
NC. GIRD	X221	1	9,794	170,077	17.365
TEEL GIRD.	X631	1	836	224,520	268.564
MP. S/C GIRD.	X071	3	50,592	1,656,780	32.747
	X171	1	18,800	465,793	24.776
	X771	1	11,440	266,356	23.282
	X971	1	92,988	894,975	9.624
NC. PRESTR. GIRD.	X081	3	31,342	697,675	22.260
	X181	2	46,516	921,967	19.820
	X281	4	64,646	913,228	14.126
	X481	1	9,240	131,190	14.198
	X781	4	36,004	609,054	16.916
	X981	1	17,304	257,426	14.876
		31	432,459	8,024,283	18.555

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF ROADWAY MILEAGE AWARDED
BY AVERAGE DAILY TRAFFIC
(NEW OR RECONSTRUCTED ROADWAY ONLY)
DURING CALENDAR YEAR 1971

TABLE 7

APRIL 27, 1972

SYSTEM - INTERSTATE

AVERAGE DAILY TRAFFIC	MILEAGE	COST	COST PER MILE
0001-0049	.000		
0050-0099	.000		
0100-0199	.000		
0200-0299	.000		
0300-0399	.000		
0400-0499	.000		
0500-0999	.000		
1000-1499	29.760	$ 14,213,693	$ 477,610
1500-1999	41.116	$ 11,929,745	$ 290,148
2000-2999	5.906	$ 3,890,662	$ 658,764
3000-4999	.000		
5000-OVER	.000		
TOTAL	76.782	$ 30,034,100	$ 391,160

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF ROADWAY MILEAGE AWARDED
BY AVERAGE DAILY TRAFFIC
(NEW OR RECONSTRUCTED ROADWAY ONLY)
DURING CALENDAR YEAR 1971

TABLE 7A

APRIL 27, 1972

SYSTEM - PRIMARY I

AVERAGE DAILY TRAFFIC	MILEAGE	COST	COST PER MILE
0001-0049	.000		
0050-0099	.000		
0100-0199	.000		
0200-0299	.000		
0300-0399	.000		
0400-0499	.000		
0500-0999	7.325	$ 1,319,232	$ 180,099
1000-1499	.000		
1500-1999	8.393	$ 1,137,056	$ 135,476
2000-2999	3.021	$ 960,128	$ 317,817
3000-4999	.000		
5000-OVER	.000		
TOTAL	18.739	$ 3,416,416	$ 182,315

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF ROADWAY MILEAGE AWARDED BY AVERAGE DAILY TRAFFIC (NEW OR RECONSTRUCTED ROADWAY ONLY) DURING CALENDAR YEAR 1971

TABLE 7C

APRIL 27, 1972

SYSTEM - SECONDARY

AVERAGE DAILY TRAFFIC	MILEAGE	COST	COST PER MILE
0001-0049	.000		
0050-0099	25.136	$ 1,135,391	$ 45,169
0100-0199	19.385	$ 1,713,606	$ 88,398
0200-0299	1.373	$ 235,966	$ 171,861
0300-0399	.000		
0400-0499	.000		
0500-0999	.000		
1000-1499	.000		
1500-1999	.000		
2000-2999	2.144	$ 804,447	$ 375,208
3000-4999	.000		
5000-OVER	.000		
TOTAL	48.038	$ 3,889,410	$ 80,965

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF ROADWAY MILEAGE AWARDED BY AVERAGE DAILY TRAFFIC (NEW OR RECONSTRUCTED ROADWAY ONLY) DURING CALENDAR YEAR 1971

TABLE 7D

APRIL 27, 1972

SYSTEM - OTHER

AVERAGE DAILY TRAFFIC	MILEAGE	COST	COST PER MILE
0001-0049	.000		
0050-0099	.000		
0100-0199	.000		
0200-0299	.000		
0300-0399	.000		
0400-0499	.000		
0500-0999	.000		
1000-1499	.000		
1500-1999	.000		
2000-2999	.000		
3000-4999	.000		
5000-OVER	.257	$ 249,976	$ 972,669
TOTAL	257	$ 249,976	$ 972,669

STATE OF MONTANA DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH BUREAU

SUMMARY OF CONTRACTED AND NON-CONTRACTED COSTS BY SYSTEM DURING CALENDAR YEAR 1971

TABLE 8

APRIL 27, 1972

SYSTEM	CONTRACTED COST	NON CONTRACTED COST	TOTAL
INTERSTATE	$ 53,616,789	$ 5,990,151	$ 59,606,940
PRIMARY I	$ 4,784,969	$ 520,468	$ 5,305,437
PRIMARY II	$ 15,314	$ 1,530	$ 16,844
SECONDARY	$ 8,037,573	$ 887,738	$ 8,925,311
OTHER	$ 346,947	$ 36,068	$ 383,015
TOTAL	$ 66,801,592	$ 7,435,955	$ 74,237,547